

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference LW9107PC	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/KR 2004/003429	(Earliest) Priority Date (<i>day/month/year</i>) 8 January 2004 (08.01.2004)	International filing date (<i>day/month/year</i>) 24 December 2004 (24.12.2004)
Applicant SAMSUNG ELECTRO-MECHANICS CO., LTD		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see continuation of this first sheet.

2. ☐ **Certain claims were found unsearchable** (see continuation of this first sheet)

3. ☐ **Unity of invention is lacking** (see continuation of this first sheet)

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in the continuation of this first sheet. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the drawings to be published with the abstract is Figure No. 2

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Continuation of first sheet**Continuation No. IV:****Text of the abstract****(Continuation of item 5 of the first sheet)**

A surface light source device (100) includes a first substrate (110), an electrode (150), a discharge auxiliary layer (112), a fluorescent layer (114) and a second substrate (120). The discharge auxiliary layer (112) includes carbon nanotubes and an oxide. The surface light source device may further include a fluorescent layer. The surface light source device (100) may have a discharge fluorescent layer including carbon nanotubes, an oxide and a fluorescent material instead of a discharge auxiliary layer (112) and a fluorescent layer (114). Using carbon nanotubes and an oxide in the surface light source device, a discharge firing voltage and a discharge sustaining voltage may be lowered due to a geometric effect of a carbon nanotube and a high yield of secondary electron. Therefore, efficiency of the surface light source device is improved, so that power consumption of an LCD apparatus is decreased and luminance of the LCD apparatus is increased.

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷: H01J 65/04, H01J 61/30, G02F 1/13357

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷: G02F, H01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPOCOD, WPI, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 122 759 A2 (SAMSUNG) 8 August 2001 (08.08.2001) <i>figures 3, 9-12, paragraphs 10-14, 19-20, 34-41.</i>	1-4, 9, 10, 12, 13, 14, 16, 17, 19, 22, 23, 26
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A	KR2003081866 A (NANOPACIFIC INC) 22 October 2003 (22.10.2003) (abstract).[online] [retrieved on 15.03.2005]. Retrieved from: EPOQUE WPI Database	1, 2, 9, 10, 12, 14, 16, 17, 19, 22, 23, 26
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A	US 2002/0105259 A1 (KIM) 8 August 2002 (08.08.2002) <i>figures 2-4, 9C, 9D, paragraphs 33-35, 42.</i>	1-3, 9-11, 14, 16-18, 20, 22, 23, 26
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☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
16 March 2005 (16.03.2005)Date of mailing of the international search report
5 April 2005 (05.04.2005)Name and mailing address of the ISA/ AT
Austrian Patent Office
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/0132711 A1 (YOO et al.) 17 July 2003 (17.07.2003) figures 1-4, 7, paragraphs 8-11, 26-36, 40-44. -----	1, 9, 14, 16, 22, 26

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/KR 2004/003429

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
EP	A2	1122759	2001-08-08	JP	A	2001222944	2001-08-17
				US	B1	6346775	2002-02-12
				KR	A	2001077686	2001-08-20
KR	A	20030818 66	2003-10-22	none			
US	A	20020105 259		none			
US	A	20030132 711		none			